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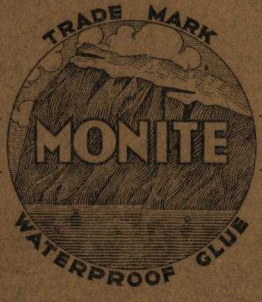
MONITE Waterproof GLUE

IN POWDERED FORM

Mixed Cold



Used Cold

Made Under U. S. Patents

MANUFACTURED BY

Casein Glue Mfg. Co.

Successors to Certus Cold Glue Co.
Detroit, Michigan

GENERAL SALES OFFICE
136 WEST LAKE STREET
CHICAGO, ILL. - - U. S. A.

—

FACTORY
NORTH SECOND STREET, MINNEAPOLIS, MINN.

Monite Waterproof Glue

DESCRIPTION—Monite Waterproof Glue is a casein glue; its principal ingredient being casein, which is a milk product. The history of casein shows that it was first recognized as an adhesive by the Egyptians and excavations of Egyptian catacombs has established the fact that casein was used as a glue in those early days. The glue joints made so long ago are still intact and have not deteriorated with the passing of centuries.

Casein was used as a glue by our fore-fathers, but it was mixed in a crude way and had to be used up within 10 or 20 minutes, after it was made. It is only in the last few years that it has been adapted to commercial use in the United States.

This modern adhesive was brought forward and developed under the stress of the war necessity of providing an adhesive for aeroplane, gunstock, and wagon purposes, etc., that would not be affected by water or any atmospheric conditions. Until this glue was developed, reliance had to be placed on the old hide

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or animal glues, that whilst excellent adhesives in many ways, have no water resistant qualities. They are today where they were 30 years ago and have not kept pace with modern development. Who has not experienced the peeling veneer on the outer doors of a house or the cracking and splitting of the joints of veranda posts? This is now changed. In *Monite Waterproof Glue,* we have an adhesive that forms a glue joint which cannot be dissolved in water—that can be boiled for from 5 to 8 hours—that can be soaked in cold water for 10 days—that can be baked until the wood is charred—yet the glue joint remains unaltered.

It is not to be confused with so-called waterproof glues that are composed of pitch, rubber, gums, etc. This glue is a commercial product suitable for use wherever animal or vegetable glues are used, possessing all the above mentioned desirable features, that make for permanence and lasting satisfaction.

Monite Waterproof Glue comes to the user in the form of a creamy white powder ready for use. It is clean to handle and odorless.

It is sold in wooden containers that are convenient for factory use.

SAMPLE PAILS CONTAINING 35 LBS.
HALF BARRELS CONTAINING 100 LBS.
BARRELS CONTAINING 300 LBS.

This method of packing insures the glue powder reaching the customer in good condition and keeps it away from floor moisture. It is important that the glue powder should be kept dry and in a cool place and if this is done, it will keep for an indefinite period.

THE SPECIAL PROPERTIES AND ADVANTAGES OF MONITE WATERPROOF GLUE are:

WATER RESISTANCE
HEAT RESISTANCE
STRENGTH AND UNIFORMITY
MIXED COLD
USED COLD

As stated above, glue joints can be boiled, soaked and baked, without any weakening.

Climatic changes do not affect it.

It is also oil proof; soaking in oil does not weaken its holding strength.

It is as strong as any glue made.

Every barrel is uniform; each shipment acts exactly as each preceding shipment and exactly the same instructions apply in using. It will glue damp wood, regardless of moisture content. Pitch pine, always a difficult problem with animal glues, can be easily glued with *Monite Waterproof Glue*. Oiled wood can also be glued with success.

It is simple and dependable. There are no "tricks" to it; no special care or treatment has to be given material to be glued.

Wood does not need to be heated or the joint roughened.

The glue room should be kept cool, not hot. Employees appreciate this feature in the summer time.

No special heating is required in the winter. It does not matter whether the glue room is drafty or cool, as long as it is above the freezing point.

METHOD OF USE—Full instructions will be found under the heading "General Directions for Use," but in general it may be said that the powder is mixed with cold water, and after a period of 15 minutes during which chemical action takes place, a smooth glue solution is formed, which stays in usable condition for a full working day.

VARIETIES AND ADAPTABILITY FOR DIFFERENT WORK—Monite Waterproof Glue is made in two varieties, Veneer and Joint.

VENEER GLUE—as the name implies, is specially suited for veneer work and all purposes where fairly large surfaces are to be glued. It has slightly greater water resistant power than Joint Glue, whilst Joint Glue has rather higher adhesive strength. Veneer Glue is suited for gluing plywoods and veneers; gluing felt to metal; cardboard to wood or metal; gluing linoleum to wood or concrete floors; automobile running boards and tops; marine work of all descriptions.

JOINT GLUE—as its name implies, is specially suitable for the gluing of joints or any other work where the glued area is not large and where maximum strength is essential, combined with water resistance. It is suitable for cabinet work of all descriptions; pattern work; automobile steering wheel laminations; dash boards; spokes, etc. Suitable for laminated work of every nature. Used by brush manufacturers to set bristles and glue up handles. Suitable for all outdoor work.

The glue is mixed cold and used cold and there are no heated glue mixers or heated glue pots to bother about.

It is odorless, clean, and sanitary in use. The unhealthy odors and disagreeable working conditions of the old fashioned glue rooms are no longer necessary.

COST COMPARISONS—Monite Waterproof Glue for commercial use costs considerably less than animal glue and slightly more than vegetable glue. It has a spread equal to animal glue and about 40% greater than vegetable glue. A careful review of costs, and a consideration of its properties, which are not possessed by any other glues, will not fail to convince the manufacturer of its economy and desirability.

A comparison of *Monite Waterproof Glue* with any other Casein glue is welcomed. The chief points that should be investigated and compared are:

UNIFORMITY
SPEED IN FORMING GLUE SOLUTION
EASE IN SPREADING
SPREADING CAPACITY PER POUND
LENGTH OF TIME GLUE SOLUTION REMAINS LIQUID AND USABLE
ADHESIVE STRENGTH
WATER RESISTANCE
COST

We will gladly furnish samples for testing purposes to prospective users, to manual training schools, laboratories, or colleges.

We claim, with perfect confidence, that tests will prove the truth of our statement, that *Monite Waterproof*

Glue is the highest grade and most satisfactory casein glue now being manufactured.

TESTS — Numerous tests, too many and voluminous to quote fully here, have been conducted by us and by the Forest Products Laboratory of Madison, Wisconsin. We will gladly give full data covering them upon request.

In general, we state that the average shear test strength per square inch found by testing over 250 samples, averaged over 2500 lbs. It is a standard test to require casein glued joints to stand from 5 to 8 hours boiling or 10 days immersion in cold water and after redrying, the glued joint must be unimpaired.

Monite Waterproof Glue fills these test requirements with unfailing success.

We recommend to the glue student the perusal of the following Forest Products Laboratory bulletins, dealing with casein glues in general and giving exhaustive details of tests conducted.

1. Casein Glues—Their manufacture, preparation and application, L26-281-May 5, 1919
2. Effect of Age on Casein Glues. LO 11-377-F18
3. Comparison of various types of Glue, L26-281-May 5, 1919
4. Waterproofing Panels, Reprint of note by O. L. Sponster
5. Water Resistant Glues, Reprint of note by F. L. Browne
6. Gluing Veneer at high moisture content F 11—Technical Note
7. Waterproof Glues in Automobile Manufacture F14
8. Built up Artificial Limb blanks, D 3 Technical Note

INFORMATION—Enquiries are welcomed. Tell us your gluing problems and we will give you all the assistance in our power. We believe that we have more practical experi-

ence in the manufacturing and adapting of casein glues to commercial uses than any organization in the world.

We will be pleased to go into cost figures, and will quote current prices on application.

General Directions for Using Monite Waterproof Glue

GENERAL—The glue is prepared for use by mixing the powder with cold water in the following proportions—

JOINT GLUE—10 parts of powder to 18 parts of cold water, by weight.

VENEER GLUE—10 parts of powder to 20 parts of cold water, by weight.

Use a scale, and weigh the powder and water and thus make sure of your proportions. DON'T GUESS AT IT.

MIXING SMALL QUANTITIES—*We* send out sample packages containing approximately one pound of *Monite Waterproof Glue* powder.

Add the powder to the water slowly and stir briskly for five minutes, until it becomes thick. Allow this mixture to stand for ten minutes. During this time the chemical action takes place, and the mixture goes back to the consistency of thick cream. Stir well before using. The mixture should now be smooth and ready for use.

If glue is used in quantities, a mixing machine should be used, thus assuring thorough dissolving of the glue powder.

MIXING WITH MACHINE—Pour cold water into bowl. Start mixer at high speed, adding glue powder slowly to avoid lumping. Run about five minutes until mixture thickens. Allow mixture to stand for ten minutes. During this time the chemical action takes place, and the mixture goes back to the consistency of thick cream. Finish by running mixer for a minute or two, after which the solution should be smooth and ready for use.

SPREADING—This can be done by brush or by machine.

Spreaders should have a corrugated roller. They must not be heated, because this glue is mixed and used cold. Brass, copper or aluminum should not come in contact with the glue.

We recommend the use of a stiff bristle brush 2 to 2½ in. long, in preference to the ordinary glue brushes. We will supply upon request special brushes made of tampico bristles, which we have tested and found satisfactory.

PREPARATION OF MATERIAL—No special preparation of material is necessary, before gluing. Joints and surfaces should be smooth and should not be roughened. The smoother the wood the greater the strength of the glue joint. See that surfaces are clean. Do not heat material before gluing. The glue is used cold and heat must not be applied in any way.

SETTING—CLAMPING—Ample uniform pressure must be applied to glued joints and maintained for from 1½ to 2 hours. Material can be worked within 12 hours.

Veneers and plywood should be left under pressure (not over 75 lbs. per square inch) for from 1½ to 3 hours.

DRYING—Glued stock should be dried either by natural means, or by artificial heat *of not over 110 deg. Fahrenheit.*

NOTE—It is not necessary to kiln dry wood, before gluing. *Monite Waterproof Glue* makes a perfect joint on wood having a moisture content of up to 40%.

VARIATIONS OF MIXTURE—Whilst the above proportions are standard, they may be varied slightly for different work. Thus thinner glue may, with advantage, be used on soft woods and thicker glue on hard woods. By adding water or powder the solution can be thinned or thickened, according to the gluing of soft or hard woods, or large surfaces of veneer.

LEFT OVER GLUE—At normal temperatures of about 70 deg. a mixture made in the morning remains in usable condition for the period of a working day. In very hot weather this period is shortened, and it is advisable to make a mixture at both morning and noon.

We advise judging the day's glue requirements carefully, only mixing such quantity as will be used the same day.

Left over glue becomes gelatinous and is a total loss, unless thinned down. This is done by adding cold water, mixing it with the glue solution, keeping it covered in a cool place. When ready to resume gluing operations, add glue powder equal to half the weight of the water that was added to the left over glue. Mix in the ordinary way for about 15 minutes, and the solution is ready for use.

APPARATUS—Do not mix in brass, copper, or aluminum vessels, but only enameled ware, tin, galvanized iron, china or glass.

CLEANLINESS—Use only clean mixers, brushes and pots. Soak them every night in cold water and clean them in the morning.

STORAGE—Keep the glue powder in a dry, clean place. It will keep indefinitely if kept away from moisture.

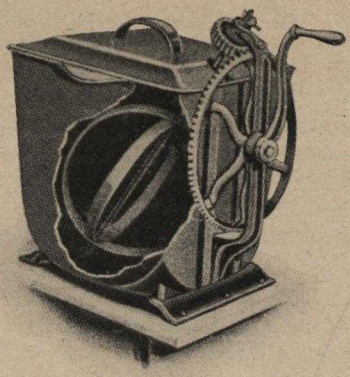
TESTS—The highest waterproof quality and adhesive strength will be obtained after natural drying of glued material for from 4 to 8 days.

Panels may be tested by boiling 8 hours or by soaking 10 days in cold water and afterwards baking, after which they must not separate in the glue joint.

MIXERS—While small amounts of glue can be mixed by hand, it is strongly recommended that where glue is used in quantities, a mixing machine be used. These machines are efficient and inexpensive. We keep on hand and supply to customers different models which we have proved to be satisfactory. They range in type and capacity from hand power mixers of 2 gallon capacity to power machines of 20 gallon capacity. We will supply details and prices on machines upon request. Mixers can be supplied equipped with motor, or special equipment can be fitted according to factory requirements.

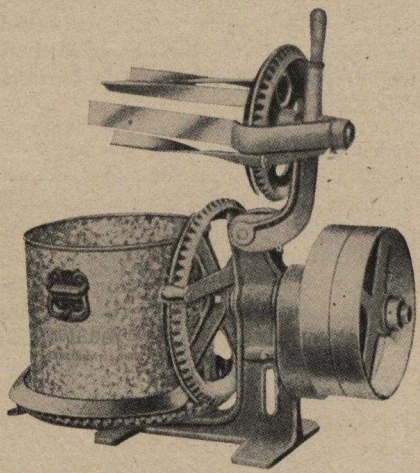
SPREADERS—We are prepared to figure on spreader requirements and submit quotations and recommendations.

Mixers for Monite Waterproof Glue



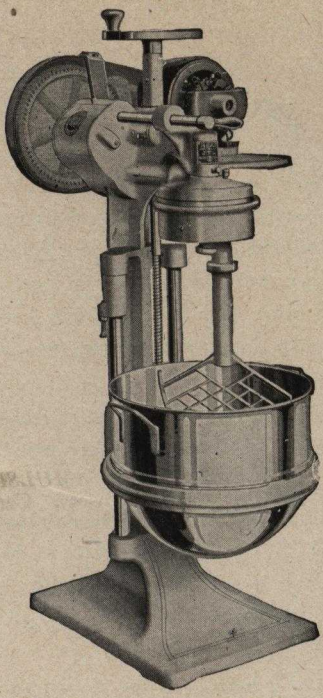
HUNTER'S CYCLONE EMULSIFIER—Hand mixer for small glue users. Capacity of bowl is 10 quarts. Mixes 5 lbs. of glue powder easily. Machine clamps to table or bench, and bowl can be removed and replaced as desired. Bowl is of galvanized iron, and is fitted with lid, preventing slopping over.

This machine is simply and strongly made, and will handle a large quantity of work.



DAY PONY MIXER—This machine is put out with tight and loose pulley, also detachable hand wheel for use where power is not available. Capacity of can is 30 quarts of glue solution. Mixes up to 20 lbs. of glue powder. Machine is sold to be bolted to bench or floor, but stand can be supplied. Can is removable.

This machine is strongly recommended. It is the cheapest and most efficient power mixer available, and will fill all requirements, except in the largest plants. This machine can be equipped with motor drive.



LARGE STAND MIXER, FOR PULLEY OR MOTOR DRIVE—The above type of machine is suited for large glue users. We sell these machines equipped with 60 quart bowls and two beaters. They will handle any quantity from 5 lbs. to 40 lbs. of glue powder, and produce a perfect glue solution. Bowls are interchangeable. With two or more bowls, one of these mixers will handle the largest factory's glue requirements. They are equipped for pulley drive, but can be equipped for motor drive.

NOTE.

Electrical specifications must be furnished for motor drive machines.

Owing to frequent price changes by the manufacturers, we are unable to print firm prices on mixers in this list. We will gladly quote on application.

The following are Extracts from Letters received from some of our Customers:

"We have been very well satisfied with this glue so far that we have stopped using the hot glue entirely, and we find that your glue answers our purposes very much better in most respects than the other glue and we have been using this steadily since the first time we tried it."

"We are pleased to say that our experience so far with your glue is highly satisfactory."

"At first our men were rather skeptical in regard to the strength of the glue but after having given it a thorough trial they seem to prefer it to the hot glue."

"The glue I have used has proven very satisfactory and I have used it through the coldest weather all winter, where it would have been impossible to have used hot glue. I would be doing anyone a favor to get them to use the cold water glue once, and they would be a permanent user."

"We are highly pleased at the results from the use of this glue and shall continue to use it in preference to the hide glue."

"Your *MONITE* glue has proved very satisfactory and has already shown large savings over the hot glue, and the working conditions of our plant have been greatly improved."

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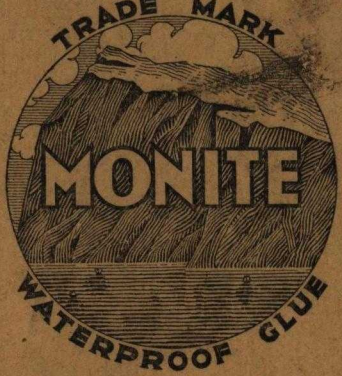
GIVE MONITE WATERPROOF GLUE A TRIAL IN YOUR PLANT AND SHARE THE GLUE SATISFACTION OF HUNDREDS OF REGULAR USERS.

Strength Uniformity



Dependability

Waterproof Heatproof

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